

Bachelor of Science (Hons) in Network Security and Computer Forensics

The Bachelor of Science (Honours) in Network Security and Computer Forensics is targeted at those wishing to enter the Information Technology (IT) sector as Computer Forensic Analysts, Vulnerability Security Research Engineers, Digital Forensic Examiners, Malware Media Forensic Analysts, Forensic Auditors, Network Security Specialists, Computer Crime Investigators or Security Analysts, among other things.

Programme details:

The programme consists of core (required) and elective modules as detailed below. Some modules may have pre-requisites (i.e. may require the student to pass another module or set of modules first). Some modules may be co-requisite (i.e. such modules are required to be taken together). The number at the end of the module in parenthesis indicates the credit load of the module. 1 credit is equal to 10 hours of learning (guided, in-class and independent combined); therefore a 10-credit module requires on average 100 hours of learning from the student.

Core modules:

- C5 - ICO - 11: Introduction to Computers (20)
- C5 - MAT - 11: Mathematics for Computing (20)
- D5 - CSS - 14: Communication & Study Skills (20)
- C5 - CSA - 11: Computer Systems Architecture (20)
- C5 - OSH - 11: Operating Systems & Hardware (20)
- C6 - IPC - 11: Introduction to programming using C++ (20)
- C6 - QMD - 11: Querying & Managing Database (40)
- C6 - FNS - 13: Fundamentals of Network Security (20)

- C6 - LIE - 19: Linux Essentials (20)
- C7 - IDS - 13: Information and Data Security (20)
- C6 - CFD - 13: Computer Forensics and Data Recovery (20)
- C7 - JAV - 11: Programming using Java (20)
- C7 - PCS - 19 Principles of Cyber Security (20)
- C7 - BIF - 13: Biometric Fundamentals (20)
- C7 - NH1 - 11: Managing Network Hardware 1 (20)
- C7 - EHK - 13: Ethical Hacking (20)
- C7 - CYL - 17: Cyber Law (20)
- C7 - PPR - 11: Professional Practice (60)
- C8 - NH2 - 11: Managing Network Hardware 2 (20)
- C8 - MAN - 13: Malware Analysis (20)
- C8 - PRO - 11: Project (40)

Electives

- C8 - CCI - 13 Cyber Crime Investigation (20) or C8 - WNA - 13 Windows Network Administration (20)
- B8 - ENT - 20 : Essentials of Entrepreneurship
- C8 - APD - 20 : Analytical Product Design
- E8-ISD-18: Innovation for Sustainable Development

Semester 1:

- C5 - ICO - 11, C5 - MAT - 11, D5 - CSS - 14

Semester 2:

- C5 - CSA - 11, C5 - OSH - 11, C6 - IPC - 11

Semester 3:

- C6 - QMD - 11, C7 - NH1 - 11

Semester 4:

- C6 - CFD - 13, C6 - LIE - 19, C6 - FNS - 13

Semester 5:

- C7 - JAV - 11, C7 - PCS - 19, C7 - BIF - 13

Semester 6:

- C7 - EHK - 13, C7 - CYL - 13, C7 - IDS - 19

Semester 7:

- C7 - PPR - 11,

Semester 8:

- C8 - NH2 - 11, C8 - MAN - 13
- Select one (C8 - WNA - 13, C8 - CCI - 13)

Semester 9:

- C8 - PRO - 11, Elective (E8 - ISD - 18, B8 - ENT - 13, C8 - APD 20)

Program Version Course List



<u>Course Code</u>	<u>Course Description</u>	<u>Credits</u>	<u>Elective List</u>	<u>Pre-Requisite List</u>	<u>Co-Requisite List</u>	<u>PreElect</u>	<u>ResourceList</u>
NCF-8BO-23 Bachelor of Science in Network Security & Computer Forensics				Weeks :208.00			
				Credits :480.00			
Core							
B8-ENT-13	Essentials of Entrepreneurship	20.00					
C5-CE1-20	Computer and its Essentials 1	10.00					
C5-MAT-20	Mathematics	10.00					
C5-OSH-11	Operating Systems and Hardware	20.00					STDOS - Standard OS
C5-PLD-20	Programming Logic and Design	10.00					
C6-DBC-20	Database Concepts	10.00					
C6-PIE-20	Professional Issues and Ethics	10.00					
C7-CGT-23	Cryptographic Techniques	10.00					
C7-PPC-20	Professional Practice in Computing	40.00					
C7-WMS-23	Wireless and mobile device security	10.00					
D6-AWS-20	Academic Writing for STEM	10.00					
C6-CE2-20	Computer and its Essentials 2	10.00		C5-CE1-20 - Computer and its Essentials 1			
C7-RMS-20	Research Methods for STEM	10.00		C5-MAT-20 - Mathematics			
C6-CFL-23	Computer Forensics Lab	10.00		C5-OSH-11 - Operating Systems and Hardware			
C6-CFO-23	Computer Forensics	10.00		C5-OSH-11 - Operating Systems and Hardware			
C6-EOL-20	Essentials of Linux	10.00		C5-OSH-11 - Operating Systems and Hardware			
C6-NEF-20	Networking Fundamentals	20.00		C5-OSH-11 - Operating Systems and Hardware			
C6-PUC-20	Programming using C++	20.00		C5-CE1-20 - Computer and its Essentials 1			
C6-PUC-20	Programming using C++	20.00		C5-PLD-20 - Programming Logic and Design			
C6-OSF-23	Operating System Forensics	10.00		C6-CFO-23 - Computer Forensics			
C7-IDS-23	Information and Data Security	10.00		C6-CFO-23 - Computer Forensics			

<u>Course Code</u>	<u>Course Description</u>	<u>Credits</u>	<u>Elective List</u>	<u>Pre-Requisite List</u>	<u>Co-Requisite List</u>	<u>PreElect</u>	<u>ResourceList</u>
C7-EHK-13	Ethical Hacking	20.00		C6-FNS-13 - Fundamentals of Network Security C7- PCS-19 - Principles of Cyber Security			NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - VMWARE - VMWare, ZENMAP - ZenMap, ZENMAP - ZenMap, OPEVPN - OpenVPN, KALINX - Kali linux, MATRIU - Matriux, MSBSA - MS Baseline Security Analyzer, HTTRA - HTTrack
C6-NSE-20	Network Security	10.00		C6-NEF-20 - Networking Fundamentals			
C7-PCS-23	Principles of Cyber Security	10.00		C6-NEF-20 - Networking Fundamentals			
C6-RSW-20	Routing and Switching	10.00		C6-NEF-20 - Networking Fundamentals	C6-RSL-20 - Routing and Switching Lab		
C6-RSL-20	Routing and Switching Lab	10.00		C6-NEF-20 - Networking Fundamentals	C6-RSW-20 - Routing and Switching		
C7-FIT-23	Forensics Investigation Techniques	10.00		C6-OSF-23 - Operating System Forensics			
C7-SCS-23	Scripting for Cyber Security	20.00		C6-PUJ-20 - Programming Using Java			
C7-SDN-20	Software Defined Network Engineering	10.00		C6-RSL-20 - Routing and Switching Lab C6- RSW-20 - Routing and Switching			
C7-AEH-23	Advanced Ethical Hacking	10.00		C7-EHK-13 - Ethical Hacking			
C8-MAN-13	Malware Analysis	20.00		C7-EHK-13 - Ethical Hacking C6-NSE-20 - Network Security			
C8-CCI-23	Cyber Crime Investigation	10.00		C7-FIT-23 - Forensics Investigation Techniques			
C7-MFO-20	Mobile Forensics	10.00		C7-MAS-20 - Mobile Application Security C6-CFO-23 - Computer Forensics			
C7-RP1-20	Research Project 1 : Proposal Writing	10.00		C7-RMS-20 - Research Methods for STEM			
C7-CYL-23	Cyber Law	10.00		C7-RMS-20 - Research Methods for STEM C7-PCS-19 - Principles of Cyber Security			
C8-RP2-20	Research Project 2 : Dissertation	20.00		C7-RP1-20 - Research Project 1 : Proposal Writing			

<u>Course Code</u>	<u>Course Description</u>	<u>Credits</u>	<u>Elective List</u>	<u>Pre-Requisite List</u>	<u>Co-Requisite List</u>	<u>PreElect</u>	<u>ResourceList</u>
Elective							
ELEC	Semester 6 electives	10.00	C7-CCS-20 - Cloud Computing and Security, C7-SDE-20 - Security by Design, C7-IOT-23 - Internet of Things				
ELEC	Semester 7 Electives	10.00	C8-MAS-20 - Media and Storage, C8-MEF-23 - Media Forensics, C8-ISG-23 - Information Security Management and Governance				
		<hr/>					
		37					
		<hr/>					
		37					
		<hr/>					
		480.00					
		<hr/>					
		480.00					
		<hr/>					

Export to Excel